

REMARKS

In the Office Action, claims 110-138 were rejected. By this Reply and Amendment, claims 110, 119, 120, 127, 133 and 134 have been amended, and claims 110-138 remain pending in the present application. The claim amendments are fully supported in the written description and figures of the specification. No new matter has been added.

In the Office Action, claims 119, 120, 133 and 134 were objected to based on certain informalities regarding antecedent basis. Accordingly, these claims have been amended as suggested by the Examiner and the objection should not be applicable.

Claims 110-138 were rejected under 35 USC 112, second paragraph, as being indefinite. Although Applicant traverses this rejection, claims 110 and 127 have been amended to remove the recitation "by light" which was specifically referenced in the rejection. Accordingly, Applicant respectfully requests withdrawal of the rejection.

In the Office Action, claims 110-124 and 127-136 were rejected under 35 USC 102(b) as anticipated by the Miszewski reference, US Patent No.: 5,413,045. This rejection is respectfully traversed, however independent claims 110 and 127 have been amended to facilitate allowance of the present application.

The Miszewski reference describes a detonation system for use in subterranean environments. The system utilizes a firing laser 6 that provides a laser pulse along a fiber optic line 5. A splitter 4 allows a light pulse to pass and impinge an explosive material 3. The laser pulse detonates the explosive material (see column 3, lines 30-58). However, the cited document fails to describe or teach various elements of the pending claims.

By way of specific examples, the Miszewski reference fails to disclose or suggest an optical transmitter that transmits an optical signal through an optical fiber "with a predetermined characteristic" in combination with "an optical receptor located downhole to receive the optical

signal, the optical receptor having sufficient processing capability to verify the optical signal has the correct predetermined characteristic" wherein a downhole tool is activated "upon verification of the correct predetermined characteristic" as recited in amended, independent claim 110. By way of further example, the Miszewski reference fails to disclose or suggest transmitting an optical signal "with a predetermined characteristic" from an optical transmitter through an optical fiber; and "receiving the optical signal downhole at an optical receptor having sufficient signal processing capability to verify the optical signal has the predetermined characteristic" such that "upon verification by the optical receptor" a downhole tool can be activated, as recited in amended, independent claim 127.

Claims 111-124 and 128-136 ultimately depend from one of the independent claims discussed above and recite additional elements. Accordingly, the rejection also should be withdrawn with respect to these dependent claims.

Claims 126 and 138 were rejected under 35 USC 103(a) as unpatentable over the Miszewski reference in view of the Tolman et al. reference, US Patent No.: 6,394,134. This rejection is respectfully traversed. Claims 126 and 138 directly depend from independent claims 110 and 127, respectively, and recite additional elements. As discussed above with respect to the independent claims, the Miszewski reference fails to disclose or suggest elements of the independent claims as well as elements of their dependent claims. The Tolman et al. reference provides no additional disclosure that would obviate the deficiencies of the Miszewski reference. Accordingly, the rejection should be withdrawn.

Claims 125 and 137 were rejected under 35 USC 103(a) as unpatentable over the Miszewski reference in view of the Nakagawa reference, US Patent No.: 5,730,940. This rejection is respectfully traversed. Claims 125 and 137 directly depend from independent claims 110 and 127, respectively, and recite additional elements. As discussed above with respect to the independent claims, the Miszewski reference fails to disclose or suggest elements of the independent claims as well as elements of their dependent claims. The Nakagawa reference provides no additional disclosure that would obviate the deficiencies of the Miszewski reference. Accordingly, the rejection should be withdrawn.

In view of the foregoing remarks, all pending claims are believed to be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. A. Van Someren', written over a horizontal line.

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